

AMENDMENT TO THE CLAIMS

1. (Original) A system for multi-protocol messaging communication on a computer network, the system comprising:

a user interface module to permit user entry of data for an outgoing message to be transmitted on the computer network, the user interface module having a format compatible with an application software program;

first and second service providers having first and second communication protocols, respectively;

an application program interface coupled to the user interface module and communicating therewith, the application program interface defining a set of data structures to support data transfer, including the outgoing message, from the user interface to the first and second service providers; and

a conversion platform coupled to the application program interface and to the first and second service providers, the conversion platform converting data defined by at least one of the data structures of the application program interface to the first and second communication protocols for communicating with the first and second service providers, respectively, the conversion platform converting the outgoing message received from the application program interface to the first and second communication protocols and transmitting the outgoing message using the first and second communication protocols to the first and second service providers, respectively.

2. (Original) The system of claim 1 wherein the computer network is the Internet and the first and second service providers are instant messaging service providers, the outgoing message being an instant message transmitted from the user interface to first and second message

recipients who are subscribers to the first and second service providers, respectively, the conversion platform converting the instant message to the first and second communication protocols for instant messaging and transmitting the instant message to the first and second service providers, respectively.

3. (Original) The system of claim 1 wherein the conversion platform comprises a routing module and first and second protocol services modules, the routing module routing the outgoing message from the application program interface to the first and second protocol services modules for conversion to first and second communication protocols, respectively.

4. (Original) The system of claim 1 wherein the outgoing message is a command from the user interface to the first and second service providers.

5. (Original) The system of claim 1 wherein the outgoing message is a status inquiry from the user interface to the first and second service providers, to obtain status data for first and second individuals coupled to the computer network via the first and second service providers, respectively.

6. (Original) The system of claim 1 wherein the first and second service providers have first and second sets of operational capabilities, respectively, and the outgoing message is a command to request capabilities data related to the first and second sets of operational capabilities.

7. (Original) The system of claim 6 wherein the conversion platform comprises a routing module and first and second protocol services modules, the routing module routing a subsequent outgoing message from the application program interface to the first and second protocol services modules based on the capabilities data wherein the routing module routes the subsequent outgoing message to ones of the first and second protocol services modules for which the capabilities data indicates an operational capability to process the subsequent outgoing message and does not route the subsequent outgoing message to ones of the first and second protocol services modules for which the capabilities data indicates no operational capability to process the subsequent outgoing message.

8. (Original) The system of claim 1 wherein an incoming message is received via the computer network from a selected one of the first and second service providers, application program interface further defining a set of data structures to support data transfer, including the incoming message, from the selected one of the first and second service providers to the user interface, the conversion platform being further operable to convert the incoming message received from the selected one of the first and second service providers to data defined by at least one of the data structures of the application program interface.

9. (Original) The system of claim 8, further comprising a display wherein the user interface receives data related to the incoming message from the application program interface and displays the incoming message on the display.

10. (Original) The system of claim 1, further comprising a storage area to maintain a contact list containing identification data for a plurality of individuals and data related to their respective service providers.

11. (Original) The system of claim 10 wherein the outgoing message is designated for transmission to a first recipient coupled to the computer network via the first service provider, the conversion platform using the data related to service providers to convert the outgoing message to the first communication protocol and transmitting the outgoing message using the first communication protocol to the first designated recipient.

12. (Original) The system of claim 11 wherein the conversion platform comprises a routing module and first and second protocol services modules, the routing module using the data related to service providers to convert the outgoing message to the first protocol services module for conversion to first communication protocol.

13. (Original) The system of claim 1, further comprising first and second provider storage areas associated with the first and second service providers, respectively, to maintain first and second provider contact lists containing identification data for individuals that are subscribers to the first and second service providers, respectively.

14. (Original) The system of claim 13, further comprising a first server associated with the first service provider, the first provider storage area being maintained in association with the first server.

15. (Original) The system of claim 13 wherein the user interface module is executed on a local computer platform and the first provider storage area is maintained on the local computer platform.

16. (Original) The system of claim 13, further comprising a combined contact list storage area to store both the first and second provider contact lists as a combined contact list.

17. (Original) A computer-readable medium containing computer-executable instructions for performing multi-protocol messaging communication on a computer network comprising:

sensing user entry of data for an outgoing message to be transmitted on the computer network;

placing the entered data in a format compatible with an application software program;

establishing a communication link with first and second service providers having first and second communication protocols, respectively;

defining a set of application program interface data structures to support data transfer, including the outgoing message, from the user interface to the first and second service providers;

converting data defined by at least one of the set of data structures of the application program interface to at least one of the first and second communication protocols; and

transmitting the outgoing message using the at least one of the first and second communication protocols to a corresponding one of the first and second service providers.

18. (Original) The computer-readable medium of claim 17 wherein the computer network is the Internet and the first and second service providers are instant messaging service providers, the outgoing message being an instant message transmitted from the user interface to at least one of first and second message recipients who are subscribers to the first and second service providers, respectively, by converting the instant message to the at least one of the first and second communication protocols for instant messaging and transmitting the instant message to the at least one of the first and second service providers.

19. (Original) The computer-readable medium of claim 17, further comprising computer-executable instructions for routing the outgoing message from the application program interface to at least one of first and second protocol services modules corresponding to the first and second service providers, respectively, and for converting the outgoing message within the at least one of the first and second protocol services modules to the at least one of the first and second communication protocols.

20. (Original) The computer-readable medium of claim 17 wherein the outgoing message is a command from the user interface to the first and second service providers.

21. (Original) The computer-readable medium of claim 17 wherein the first and second service providers have first and second sets of operational capabilities, respectively, and the outgoing message is a command to request capabilities data related to the first and second sets of operational capabilities.

22. (Original) The computer-readable medium of claim 21, further comprising computer-executable instructions for routing a subsequent outgoing message from the application program interface to the at least one of the first and second protocol services modules based on the capabilities data wherein the subsequent outgoing message is routed to ones of the first and second protocol services modules for which the capabilities data indicates an operational capability to process the subsequent outgoing message and wherein the subsequent outgoing message is not routed the subsequent outgoing message to ones of the first and second protocol services modules for which the capabilities data indicates no operational capability to process the subsequent outgoing message.

23. (Original) The computer-readable medium of claim 17, further comprising computer-executable instructions for processing an incoming message received via the computer network from a selected one of the first and second service providers, the application program interface further defining a set of data structures to support data transfer, including the incoming message, from the selected one of the first and second service providers to the user interface, and converting the incoming message received from the selected one of the first and second service providers to data defined by at least one of the data structures of the application program interface.

24. (Original) The computer-readable medium of claim 23, further comprising computer-executable instructions for receiving data related to the incoming message from the application program interface and displaying the incoming message on the display.

25. (Original) The computer-readable medium of claim 17, further comprising computer-executable instructions for maintaining a contact list containing identification data for a plurality of individuals and data related to their respective service providers.

26. (Original) The computer-readable medium of claim 25 wherein the outgoing message is designated for transmission to a first recipient coupled to the computer network via the first service provider, the computer-readable medium further comprising computer-executable instructions for using the data related to service providers to convert the outgoing message to the first communication protocol and transmitting the outgoing message using the first communication protocol to the first designated recipient.

27. (Original) The computer-readable medium of claim 26, further comprising computer-executable instructions for using the data related to service providers to convert the outgoing message to the first protocol services module for conversion to first communication protocol.

28. (Original) The computer-readable medium of claim 17 wherein the first and second service providers include first and second provider storage areas associated with the first and second service providers, respectively, to maintain first and second provider contact lists containing identification data for individuals that are subscribers to the first and second service providers, respectively, the computer-readable medium further comprising computer-executable instructions to define a data structure of the application program interface for retrieving the identification data from the first and second provider contact lists.



29. (Original) The computer-readable medium of claim 28 wherein the first service provider includes a first server associated therewith, with the first provider storage area being maintained in association with the first server, the computer-readable medium further comprising computer-executable instructions for retrieving the first provider contact list from the first server.

30. (Original) The computer-readable medium of claim 28 wherein the application program interface is executed on a local computer platform and the first provider storage area is maintained on the local computer platform, the computer-readable medium further comprising computer-executable instructions for retrieving the first provider contact list from the local computer platform.

31. (Original) The computer-readable medium of claim 28, further comprising computer-executable instructions for combining the first and second provider contact lists as a combined contact list and storing the combined contact list.

32. (Original) A method for multi-protocol messaging communication on a computer network, the method comprising:

sensing user entry of data for an outgoing message to be transmitted on the computer network;

placing the entered data in a format compatible with an application software program;

establishing a communication link with first and second service providers having first and second communication protocols, respectively;

defining a set of application program interface data structures to support data transfer, including the outgoing message, from the user interface to the first and second service providers;

converting data defined by at least one of the data structures of the application program interface to the first and second communication protocols; and

transmitting the outgoing message using the first and second communication protocols to the first and second service providers.

33. (Original) The method of claim 32 wherein the outgoing message is a command from the user interface to the first and second service providers.

34. (Original) The method of claim 32 wherein the outgoing message is a status inquiry from the user interface to the first and second service providers, to obtain status data for first and second individuals coupled to the computer network via the first and second service providers, respectively.

35. (Original) The method of claim 32 wherein the first and second service providers have first and second sets of operational capabilities, respectively, and the outgoing message is a command to request capabilities data related to the first and second sets of operational capabilities.

36. (Original) The method of claim 35, further comprising routing a subsequent outgoing message from the application program interface to the at least one of the first and second protocol services modules based on the capabilities data wherein the subsequent outgoing

message is routed to ones of the first and second protocol services modules for which the capabilities data indicates an operational capability to process the subsequent outgoing message and wherein the subsequent outgoing message is not routed the subsequent outgoing message to ones of the first and second protocol services modules for which the capabilities data indicates no operational capability to process the subsequent outgoing message.

37. (Original) The method of claim 32, further comprising processing an incoming message received via the computer network from a selected one of the first and second service providers, the application program interface further defining a set of data structures to support data transfer, including the incoming message, from the selected one of the first and second service providers to the user interface, and converting the incoming message received from the selected one of the first and second service providers to data defined by at least one of the data structures of the application program interface.

38. (Original) The method of claim 32, further comprising a contact list containing identification data for a plurality of individuals and data related to their respective service providers.

39. (Original) The method of claim 38 wherein the outgoing message is designated for transmission to a first recipient coupled to the computer network via the first service provider, the method further comprising using the data related to service providers to convert the outgoing message to the first communication protocol and transmitting the outgoing message using the first communication protocol to the first designated recipient.

40. (Original) The method of claim 32 wherein the first and second service providers include first and second provider storage areas associated with the first and second service providers, respectively, to maintain first and second provider contact lists containing identification data for individuals that are subscribers to the first and second service providers, respectively, the method further comprising retrieving the identification data from the first and second provider contact lists.

41. (Original) The method of claim 40 wherein the first service provider includes a first server associated therewith, with the first provider storage area being maintained in association with the first server, the method further comprising retrieving the first provider contact list from the first server.

42. (Original) The method of claim 40 wherein the application program interface is executed on a local computer platform and the first provider storage area is maintained on the local computer platform, the method further comprising retrieving the first provider contact list from the local computer platform.

43. (Original) The method of claim 40, further comprising combining the first and second provider contact lists as a combined contact list and storing the combined contact list.

44. (Original) A system for multi-protocol messaging communication on a computer network, the system comprising:

a user interface to permit user entry of data for an outgoing message to be transmitted on the computer network;

first and second service providers having first and second communication protocols, respectively; and

a message manager in communication with the user interface, the message manager converting data entered through the user interface to the first and second communication protocols for communication over the computer network.

45. (Original) The system of claim 44, wherein data converted to the first and second communication protocols is transmitted over the computer network using the first and second service providers, respectively.

46. (Original) The system of claim 44 wherein the computer network is the Internet and the first and second service providers are instant messaging service providers, the outgoing message being an instant message transmitted from the user interface to first and second message recipients who are subscribers to the first and second service providers, respectively, the message manager converting the instant message to the first and second communication protocols for instant messaging and transmitting the instant message to the first and second service providers, respectively.

47. (Original) The system of claim 44 wherein the outgoing message is a command from the user interface to the first and second service providers.

48. (Original) The system of claim 44 wherein the outgoing message is a status inquiry from the user interface to the first and second service providers, to obtain status data for first and second individuals coupled to the computer network via the first and second service providers, respectively.

49. (Original) The system of claim 44 wherein the first and second service providers have first and second sets of operational capabilities, respectively, and the outgoing message is a command to request capabilities data related to the first and second sets of operational capabilities.

50. (Original) The system of claim 44 wherein an incoming message is received via the computer network from a selected one of the first and second service providers, the message manager being further operable to convert the incoming message received from the selected one of the first and second service providers.

51. (Original) The system of claim 50, further comprising a display wherein the user interface receives data related to the incoming message from the message manager and displays the incoming message on the display.

52. (Original) The system of claim 44, further comprising a storage area to maintain a contact list containing identification data for a plurality of individuals and data related to their respective service providers.

53. (Original) The system of claim 52 wherein the outgoing message is designated for transmission to a first recipient coupled to the computer network via the first service provider, the message manager using data related to service providers to convert the outgoing message to the first communication protocol and transmitting the outgoing message using the first communication protocol to the first designated recipient.

54. (Original) The system of claim 44, further comprising first and second provider storage areas associated with the first and second service providers, respectively, to maintain first and second provider contact lists containing identification data for individuals that are subscribers to the first and second service providers, respectively.

55. (Original) The system of claim 54, further comprising a first server associated with the first service provider, the first provider storage area being maintained in association with the first server.

56. (Original) The system of claim 54 wherein the user interface is executed on a local computer platform and the first provider storage area is maintained on the local computer platform.

57. (Original) The system of claim 54, further comprising a combined contact list storage area to store both the first and second provider contact lists as a combined contact list.

58. (Original) A system for multi-protocol messaging communication on a computer network, the system comprising:

a user interface to permit user entry of data for an outgoing message to be transmitted on the computer network;

first and second service providers having first and second communication protocols, respectively; and

a message manager in communication with the user interface, the message manager converting data entered through the user interface to at least one of the first and second communication protocols for communication over the computer network.

59. (Original) A system for multi-protocol messaging communication on a computer network, the system comprising:

a user interface to permit user entry of data for an outgoing message to be transmitted on the computer network;

first and second service providers having first and second communication protocols, respectively;

a database containing the first and second communication protocols; and

a message manager in communication with the user interface and the database, the message manager retrieving at least one of the first and second communication protocols and



converting data entered through the user interface to at least one of the first and second communication protocols for communication over the computer network.

60. (Original) A computer-readable medium containing computer-executable instructions for performing a method of multi-protocol messaging communication on a computer network, the method comprising:

sensing user entry of data for an outgoing message to be transmitted on the computer network;

establishing a communication link with first and second service providers having first and second communication protocols, respectively; and

converting data entered by a user to at least one of the first and second communication protocols for communication over the computer network.

61. (Original) The computer-readable medium of claim 60, further comprising transmitting data converted to the at least one of the first and second communication protocols over the computer network using a corresponding one of the first and second service providers.

62. (Original) The computer-readable medium of claim 60 wherein the computer network is the Internet and the first and second service providers are instant messaging service providers, the outgoing message being an instant message transmitted from the user interface to at least one of first and second message recipients who are subscribers to the first and second service providers, respectively, by converting the instant message to the at least one of the first

and second communication protocols for instant messaging and transmitting the instant message to at least one of the first and second service providers.

63. (Original) The computer-readable medium of claim 60, further comprising computer-executable instructions for routing the outgoing message to at least one of the first and second service providers, respectively, and for converting the outgoing message within the at least one of the first and second service providers to the at least one of the first and second communication protocols.

64. (Original) The computer-readable medium of claim 60 wherein the outgoing message is a command from the user interface to the first and second service providers.

65. (Original) The computer-readable medium of claim 60 wherein the first and second service providers have first and second sets of operational capabilities, respectively, and the outgoing message is a command to request capabilities data related to the first and second sets of operational capabilities.

66. (Original) The computer-readable medium of claim 65, further comprising computer-executable instructions for routing a subsequent outgoing message to at least one of the first and second service providers based on the capabilities data wherein the capabilities data indicates an operational capability to process the subsequent outgoing message and wherein the subsequent outgoing message is not routed to ones of the first and second service providers for which the capabilities data indicates no operational capability to process the subsequent outgoing message.

67. (Original) The computer-readable medium of claim 60, further comprising computer-executable instructions for processing an incoming message received via the computer network from a selected one of the first and second service providers, the application program interface further defining a set of data structures to support data transfer, including the incoming message, from the selected one of the first and second service providers to the user interface, and converting the incoming message received from the selected one of the first and second service providers.

68. (Original) The computer-readable medium of claim 67, further comprising computer-executable instructions for receiving data related to the incoming message and displaying the incoming message on the display.

69. (Original) The computer-readable medium of claim 60, further comprising computer-executable instructions for maintaining a contact list containing identification data for a plurality of individuals and data related to their respective service providers.

70. (Original) The computer-readable medium of claim 69 wherein the outgoing message is designated for transmission to a first recipient coupled to the computer network via the first service provider, the computer-readable medium further comprising computer-executable instructions for using the data related to service providers to convert the outgoing message to the first communication protocol and transmitting the outgoing message using the first communication protocol to the first designated recipient.

71. (Original) The computer-readable medium of claim 70, further comprising computer-executable instructions for using the data related to service providers to convert the outgoing message to the first service provider for conversion to the first communication protocol.

72. (Original) The computer-readable medium of claim 60 wherein the first and second service providers include first and second provider storage areas associated with the first and second service providers, respectively, to maintain first and second provider contact lists containing identification data for individuals that are subscribers to the first and second service providers, respectively, the computer-readable medium further comprising computer-executable instructions for retrieving the identification data from the first and second provider contact lists.

73. (Original) The computer-readable medium of claim 72 wherein the first service provider includes a first server associated therewith, with the first provider storage area being maintained in association with the first server, the computer-readable medium further comprising computer-executable instructions for retrieving the first provider contact list from the first server.

74. (Original) The computer-readable medium of claim 72 wherein the instructions are executed on a local computer platform and the first provider storage area is maintained on the local computer platform, the computer-readable medium further comprising computer-executable instructions for retrieving the first provider contact list from the local computer platform.

75. (Original) The computer-readable medium of claim 72, further comprising computer-executable instructions for combining the first and second provider contact lists as a combined contact list and storing the combined contact list.

76. (Original) A method for multi-protocol messaging communication on a computer network, the method comprising:

sensing user entry of data for an outgoing message to be transmitted on the computer network;

establishing a communication link with first and second service providers having first and second communication protocols, respectively; and

converting data entered by a user to the first and second communication protocols for communication over the computer network.

77. (Original) The method of claim 76, further comprising transmitting data converted to the first and second communication protocols over the computer network by way of the first and second service providers, respectively.

78. (Original) The method of claim 76, wherein the outgoing message is an instant message.

79. (New) In a distributed communication system in which a plurality of users associated with different realms access the Internet via a corresponding PC through a service provider, a device for providing instant messaging between the users, said device comprising:

an IM manager associated with the PC of a first user and arranged to obtain a foreign protocol for communicating with another realm; and

an IM server including an IM database with a listing of users currently connected to the Internet, each having a unique identifier,

said IM manager being further arranged to receive the unique identifier of a particular user associated with said another realm from said IM server and to establish connection to said other user using said foreign protocol.

80. (New) The device of claim 79 further comprising a local database arranged to store a plurality of foreign protocols, each protocol being associated with a corresponding different realm.

81. (New) The device of claim 79 wherein said IM server is arranged and constructed to connect to the Internet and to receive and transmit information to and from said IM manager via the Internet.

82. (New) The device of claim 79 wherein said IM database is arranged to store information related to all said users.

83. (New) The device of claim 79 further comprising a display arranged to show a list of current friends of a user and a selector operated by said user to select a friend from said list to establish communication.

84. (New) A system for establishing instant messaging between a first user associated with a first realm and a second user associated with a second realm over the Internet, said system comprising:

a first and a second device for operation by said first and second users respectively, each device including a screen to display information, a selector or other input device for giving and receiving commands and selections, a communication port arranged to communicate with other users over the Internet, and an IM component arranged to establish IM sessions during which said first and second users can exchange one of instant messages and other information over the Internet, said IM component including means for receiving a request for an IM session and means for generating a request for said IM session; said IM component including an IM database storing a protocol for the other realm; and

an IM database arranged to store a list of users registered to access instant messaging and being currently active together with their current IP address;

wherein said IM component is arranged to receive a command from said first user to establish said IM session with said second user and in response to said request said IM component is arranged to obtain the current IP address of said second user and to send an access request to said second user based on said IP address and said protocol and to establish said IM session if said access is accepted.

85. (New) The system of claim 84 wherein said users are arranged to communicate over the Internet by different SPs wherein said IM database is incorporated into one of said SPs.

86. (New) The system of claim 84 further comprising an IM service provider wherein said IM database is incorporated into said IM service provider.

87. (New) The system of claim 84 wherein each said first and second device is arranged to display a window on said screen, said window identifying a list of friends of the corresponding user, said friends being currently on line.

88. (New) The system of claim 87 wherein said first device is adapted to display a message area in one of said window and a separate window.

89. (New) The system of claim 88 wherein each said device is adapted to receive commands from the respective user to establish a first IM session between said first user and said second user and a second IM session between said first user and a third user, said third user being identified in said window.

90. (New) The system of claim 89 wherein said first device is adapted to allow said first user to switch between said first IM session and said second IM session, said first and second IM sessions being active simultaneously.

91. (New) The system of claim 90 wherein said first device is adapted to display in said message area messages with said second user during said first IM session and messages with said third user during said second IM session.



92. (New) The system of claim 87 wherein said first device is adapted to show characteristics of said friends.

93. (New) In a distributed communication system in which a plurality of users associated with different realms access the Internet via a corresponding PC through a service provider, a device for providing instant messaging between the users, said device comprising:

an IM manager associated with the PC of a first user and arranged to obtain a foreign protocol for communicating with another realm; and

an IM server including an IM database with a listing of users currently connected to the Internet, each having a unique identifier;

said IM manager and said IM server cooperating to establish a connection to said other user for conducting an IM session, said IM session consisting of exchanges of instantaneous messages between said first user and said other user.